

DOAS OUTSIDE AIR CALCULATIONS											
ROOM #	NAME	ASHRAE 62.1 SPACE TYPE	AREA (SF.)	PEOPLE	CFM/SF.	CFM/PERSON	Ez	OA REQUIRED (CFM)	SYSTEM % OA	SA TO ROOM (CFM)	ACTUAL OA (CFM)
2	PRIVATE OFFICE	OFFICE SPACE	90	1	0.06	5	1	10	100%	15	15
3	PRIVATE OFFICE	OFFICE SPACE	90	1	0.06	5	1	10	100%	15	15
5	BREAK	BREAK ROOM	105	5	0.12	5	1	39	100%	45	45
6	OPEN OFFICE	OFFICE SPACE	485	7	0.06	5	1	64	100%	75	75
7	Huddle Room	CONFERENCE/MEETING	60	2	0.06	5	1	14	100%	15	15
8	Huddle Room	CONFERENCE/MEETING	100	4	0.06	5	1	26	100%	30	30
9	RESOURCE ROOM	CONFERENCE/MEETING	140	5	0.06	5	1	33	100%	40	40
10	CONFERENCE	CONFERENCE/MEETING	180	6	0.06	5	1	41	100%	45	45
11	CONFERENCE	CONFERENCE/MEETING	125	5	0.06	5	1	33	100%	45	45
13	CORRIDOR	CORRIDORS	330	0	0.06	5	1	20	100%	75	75
14	LOWER LOUNGE	MULTIPURPOSE ASSEMBLY	2335	60	0.06	5	1	440	100%	465	465
15	UPPER LOUNGE	MULTIPURPOSE ASSEMBLY	1955	40	0.06	5	1	311	100%	330	330
19	OFFICE STORAGE	OFFICE SPACE	370	2	0.06	5	1	31	100%	35	35
20	ROAR STORE	SALES	965	14	0.12	7.5	1	224	100%	250	250

AHU OUTSIDE AIR CALCULATIONS											
ROOM #	NAME	ASHRAE 62.1 SPACE TYPE	AREA (SF.)	PEOPLE	CFM/SF.	CFM/PERSON	Ez	OA REQUIRED (CFM)	SYSTEM % OA	SA TO ROOM (CFM)	ACTUAL OA (CFM)
21	GRAB AND GO	COFFEE STATION	475	4	0.12	5	0.8	96	20%	1100	220
22	STORAGE	OCCUPIABLE STORAGE	80	1	0.06	5	0.8	12	20%	75	15
23	GAME ROOM	MULTIPURPOSE ASSEMBLY	1355	35	0.06	5	0.8	320	20%	1600	320
	ARCHIVES	OCCUPIABLE STORAGE	1021	1	0.06	5	0.8	83	20%	425	85
	POLICE STORAGE	OCCUPIABLE STORAGE	630	1	0.06	5	0.8	54	20%	300	60

HEAT RECOVERY UNIT SCHEDULE																	
MARK	MANUFACTURER	MODEL	DIMENSIONS (IN.)			WEIGHT	REFRIGERANT TYPE	COOLING CAPACITY (MBH)	HEATING CAPACITY	EER	ELECTRICAL					REMARKS	
			LENGTH	WIDTH	HEIGHT						VOLTAGE	PHASE	HZ	MCA	MOP		SCCR
CU-VRV	DAIKIN	REYA192AA1JA	69	30	65	972	R-32	176	139	NA	208	3	60	64	80	5	ALL

- REMARKS:
- PROVIDE WITH R-32 REFRIGERANT. SIZE LINES PER MANUFACTURER'S INSTRUCTIONS. SUBMIT DETAILED PIPING SCHEMATIC WITH SHOP DRAWINGS.
 - PROVIDE BASE MOUNTING RAILS WITH MECHANICAL PAD.
 - PROVIDE DAIKIN INTELLIGENT TOUCH MANAGER.
 - MANUFACTURERS SUBMITTAL MUST INCLUDE REFRIGERANT PIPING DIAGRAM WITH PIPE DIAMETERS, LENGTHS, AND REFRIGERANT VOLUMES.
 - SUBSTITUTE MANUFACTURERS SHALL BE RESPONSIBLE FOR ADDITIONAL PIPING AND REFRIGERANT.
 - CONTRACTOR AND MANUFACTURER ARE RESPONSIBLE FOR PIPING DIMENSIONS.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DIRECT COSTS ASSOCIATED WITH ANY DEVIATION RESULTING FROM CHANGES IN DESIGN.
 - THE EQUIPMENT PERFORMANCE TO MEET OR EXCEED IECC 2021.
 - PROVIDE UNITS WITH FACTORY SUPPLIED REFRIGERANT LEAK DETECTION PER ASHRAE 15 AND 34.

VRV INDOOR UNIT SCHEDULE																	
MARK	LOCATION	MANUFACTURER	MODEL	TYPE	DIMENSIONS (IN.)			WEIGHT (LBS)	COOLING CAPACITY (MBH)	HEATING CAPACITY (MBH)	dBa	ELECTRICAL					REMARKS
					LENGTH	WIDTH	HEIGHT					VOLTAGE	PHASE	HZ	MCA	MOP	
FC-02	PRIVATE OFFICE	DAIKIN	FXZ05AAVJU	2X2 CEILING CASSETTE	22.6	22.6	10.2	35	4.95	6.48	32	208	1	60	0.3	15	ALL
FC-03	PRIVATE OFFICE	DAIKIN	FXZ07AAVJU	2X2 CEILING CASSETTE	22.6	22.6	10.2	35	6.48	8.53	32	208	1	60	0.3	15	ALL
FC-04	LOCKER ROOM	DAIKIN	FXZ05AAVJU	2X2 CEILING CASSETTE	22.6	22.6	10.2	35	4.95	6.48	32	208	1	60	0.3	15	ALL
FC-05	BREAK ROOM	DAIKIN	FXZ05AAVJU	2X2 CEILING CASSETTE	22.6	22.6	10.2	35	4.95	6.48	32	208	1	60	0.3	15	ALL
FC-06	OPEN OFFICE	DAIKIN	FXZ15AAVJU	2X2 CEILING CASSETTE	22.6	22.6	10.2	36	12.60	17.06	37	208	1	60	0.4	15	ALL
FC-07	Huddle Room	DAIKIN	FXA07AAVJU	WALL MOUNTED	33.9	9.8	11.6	27	6.30	8.50	34	208	1	60	0.3	15	ALL
FC-08	Huddle Room	DAIKIN	FXZ05AAVJU	2X2 CEILING CASSETTE	22.6	22.6	10.2	35	4.95	6.48	32	208	1	60	0.3	15	ALL
FC-09	RESOURCE ROOM	DAIKIN	FXZ05AAVJU	2X2 CEILING CASSETTE	22.6	22.6	10.2	35	4.95	6.48	32	208	1	60	0.3	15	ALL
FC-10	CONFERENCE ROOM	DAIKIN	FXZ05AAVJU	2X2 CEILING CASSETTE	22.6	22.6	10.2	35	4.95	6.48	32	208	1	60	0.3	15	ALL
FC-11	CONFERENCE ROOM	DAIKIN	FXZ05AAVJU	2X2 CEILING CASSETTE	22.6	22.6	10.2	35	4.95	6.48	32	208	1	60	0.3	15	ALL
FC-12	CONFERENCE ROOM	DAIKIN	FXMA30AAVJU	DUCTED CONCEALED UNIT	31.5	65.1	9.6	101	25.92	34.00	36	208	1	60	3.0	15	ALL
FC-14E	LOWER LOUNGE A	DAIKIN	FXMA30AAVJU	DUCTED CONCEALED UNIT	31.5	65.1	9.6	101	25.92	34.00	36	208	1	60	3.0	15	ALL
FC-14I	LOWER LOUNGE B	DAIKIN	FXMA30AAVJU	DUCTED CONCEALED UNIT	31.5	65.1	9.6	101	25.92	34.00	36	208	1	60	3.0	15	ALL
FC-15	UPPER LOUNGE	DAIKIN	FXFA36AAVJU	3X3 CEILING CASSETTE	33.1	33.1	11.3	58	31.05	40.00	44	208	1	60	1.6	15	ALL
FC-19	OFFICE STORAGE	DAIKIN	FXZ09AAVJU	2X2 CEILING CASSETTE	22.6	22.6	10.2	35	8.02	10.57	33	208	1	60	0.3	15	ALL
FC-20	ROAR STORE	DAIKIN	FXFA30AAVJU	3X3 CEILING CASSETTE	33.1	33.1	11.3	58	25.92	34.00	44	208	1	60	1.0	15	ALL
FC-21	VESTIBULE	DAIKIN	FXZ12AAVJU	2X2 CEILING CASSETTE	22.6	22.6	10.2	36	10.24	13.64	34	208	1	60	0.4	15	ALL

- REMARKS:
- PROVIDE DIGITAL WALL MOUNTED THERMOSTAT TO CONTROL UNIT. REFER TO PLANS FOR THERMOSTAT LOCATIONS.
 - INTEGRATE CONTROL OF VRV INDOOR UNITS TO THE INTELLIGENT TOUCH MANAGER WITH EXISTING BAS VIA BACNET.
 - CONTRACTOR SHALL COORDINATE LOCATION TO MAINTAIN MANUFACTURER'S RECOMMENDED SERVICE CLEARANCES.
 - COORDINATE CEILING CASSETTES WITH CEILING GRID CONTRACTOR PRIOR TO INSTALLATION. 2X2 CEILING CASSETTES SHALL BE ALIGNED WITH CEILING GRID AND 3X3 CASSETTES SHALL BE CENTERED IN THE CENTER OF 4'X2' TILES.
 - UNIT SHALL HAVE INTEGRAL CONDENSATE PUMP WITH MINIMUM 18" RISE.
 - PROVIDE REFRIGERANT PIPING AND ACCESSORIES PER MANUFACTURER'S INSTALLATION INSTRUCTIONS AND RECOMMENDATIONS.
 - PROVIDE CONDENSATE PUMP WITH UNIT.

VRV BRANCH SELECTOR UNIT SCHEDULE														
MARK	MANUFACTURER	MODEL	DIMENSIONS (IN.)			WEIGHT (LBS)	NUMBER OF BRANCHES	VOLTAGE	PHASE	HZ	MCA	MOP	SCCR	REMARKS
			LENGTH	WIDTH	HEIGHT									
BSF-1	DAIKIN	BSF6A54AAVJ	33.4	9.5	9.5	99	6	208	1	60	1.9	15	ALL	
BSF-2	DAIKIN	BSF6A54AAVJ	33.4	9.5	9.5	99	6	208	1	60	1.9	15	ALL	
BSF-3	DAIKIN	BSF4A54AAVJ	19.3	27.7	9.5	73	4	208	1	60	1.2	15	ALL	

- REMARKS:
- REFER TO PIPING SCHEMATICS FOR ADDITIONAL INFORMATION.
 - CONTRACTOR SHALL COORDINATE TO ENSURE MANUFACTURER'S RECOMMENDED CLEARANCES ARE MAINTAINED.

DEDICATED OUTSIDE AIR SYSTEM SCHEDULE																																					
MARK	MANUFACTURER	MODEL	DIMENSIONS (IN.)			SUPPLY FAN						COOLING PERFORMANCE										HOT GAS REHEAT				GAS HEAT				ELECTRICAL DATA				REMARKS			
			LENGTH	WIDTH	HEIGHT	WEIGHT (LBS)	OUTSIDE AIRFLOW (CFM)	ESP (in. wg)	MOTOR TYPE	FAN QTY	HP (PER FAN)	REFRIGERANT TYPE	COOLING STAGES	TOTAL (MBH)	SENSIBLE (MBH)	ENTERING COIL TEMPERATURE EAT DB (F)	LEAVING COIL TEMPERATURE EAT WB (F)	FACE VELOCITY (FPM)	APD (in. wg)	COIL ROWS	FINSIN	EER	CAPACITY (MBH)	COIL LAT DB (F)	EAT (F)	LAT (F)	INPUT CAPACITY (MBH)	OUTPUT CAPACITY (MBH)	HEATING STAGES	GAS PRESSURE (IN. WG)	VOLTS / HZ / PH	MCA	MOPD		SCCR		
DOAS-1	VALENT	VX-112-101-G-E2	120.7	86.4	65.9	2190	1500	1.5	PLENUM, DIRECT DRIVE	1	0.66	R-454B	INVERTER SCROLL	118.2	68.6	95.0	75.0	49.4	49.1	127	0.068	4	14	11.8	53.9	84.6	5.0	94.9	200	162	16:1	6"14"	208/60/3	54.7	60	10	ALL

- REMARKS:
- REFER TO DRAWINGS FOR CONFIGURATION.
 - UNITS ARE PROVIDED WITH SINGLE POINT POWER CONNECTION AND UNIT POWERED GFI OUTLET.
 - SUPPLY AND EXHAUST FANS SHALL HAVE VIBRATION ISOLATORS.
 - STAINLESS STEEL HEAT EXCHANGE TUBES
 - ALL FANS TO BE SUPPLIED WITH MOTOR SHAFT GROUNDING RINGS AND FACTORY WIRED VFDs.
 - PROVIDE UNITS WITH FACTORY SUPPLIED REFRIGERANT LEAK DETECTION PER ASHRAE 15 AND 34.

AIR HANDLING UNIT SCHEDULE																																							
MARK	MANUFACTURER	MODEL	DIMENSIONS (IN.)			SUPPLY FAN						COOLING PERFORMANCE										HOT WATER COIL				ELECTRICAL DATA				REMARKS									
			LENGTH	WIDTH	HEIGHT	WEIGHT (LBS)	OUTDOOR AIR (CFM)	AIRFLOW (CFM)	ESP (in. wg)	MOTOR TYPE	FAN QTY	HP (PER FAN)	REFRIGERANT TYPE	COOLING STAGES	TOTAL (MBH)	SENSIBLE (MBH)	ENTERING COIL TEMPERATURE EAT DB (F)	LEAVING COIL TEMPERATURE EAT WB (F)	FACE VELOCITY (FPM)	APD (in. wg)	COIL ROWS	FINSIN	CAPACITY (MBH)	EAT DB (F)	LAT DB (F)	EWT (F)	LWT (F)	FLOW RATE (GPM)	PRESSURE DROP (FT WG)		ROWS	FPI	FACE VELOCITY (FT/MIN)	VOLTS / HZ / PH	MCA	MOPD	SCCR		
AHU-1	DAIKIN	BCVE041	64	47.5	65.5	461	700	3500	2.0	ECM DIRECT	2	2.77	R-32	TWO-STAGE TANDEM	118.5	92.5	78.5	65.0	50.3	49.9	436.4	0.63	6	12	135297	55.8	91.2	160	140	13.8	1.96	1	12	436.4	208/60/3	26	35	5	ALL

- REMARKS:
- REFER TO DRAWINGS FOR CONFIGURATION.

CONDENSING UNIT SCHEDULE																	
MARK	MANUFACTURER	MODEL	DIMENSIONS (IN.)			WEIGHT	REFRIGERANT TYPE	COOLING CAPACITY (MBH)	HEATING CAPACITY	EER	ELECTRICAL				REMARKS		
			LENGTH	WIDTH	HEIGHT						VOLTAGE	PHASE	HZ	MCA		MOP	SCCR
CU-AHU	DAIKIN	DC6TE12030	36	36	42	394	R-32	118	NA	11.4	208	3	60	46	60	10	ALL

- REMARKS:
- PROVIDE WITH R-32 REFRIGERANT. SIZE LINES PER MANUFACTURER'S INSTRUCTIONS. SUBMIT DETAILED PIPING SCHEMATIC WITH SHOP DRAWINGS.
 - PROVIDE BASE MOUNTING RAILS.
 - MANUFACTURERS SUBMITTAL MUST INCLUDE REFRIGERANT PIPING DIAGRAM WITH PIPING DIAGRAM WITH PIPE DIAMETERS, LENGTHS, AND REFRIGERANT VOLUMES.
 - SUBSTITUTE MANUFACTURERS SHALL BE RESPONSIBLE FOR ADDITIONAL PIPING AND REFRIGERANT.
 - THE EQUIPMENT PERFORMANCE TO MEET OR EXCEED IECC 2021.
 - PROVIDE UNITS WITH FACTORY SUPPLIED REFRIGERANT LEAK DETECTION PER ASHRAE 15 AND 34.

EXHAUST FAN SCHEDULE															
MARK	MANUFACTURER	MODEL #	TYPE	SERVICE	AIRFLOW (CFM)	E.S.P. (IN. WG)	DRIVE	VOLTAGE	PHASE	HZ	MCA	MOP	SCCR	dBa	REMARKS
EF-RELIEF	GREENHECK	USF-18	UNIVERSAL SINGLE WIDTH BLOWER	GAME ROOM RELIEF	3500	1.343	DIRECT VFD	208	60	60	13.25	20	5	68	2, 6, 7

- REMARKS:
- PROVIDE WITH BACKDRAFT DAMPER.
 - PRE-APPROVED MANUFACTURERS: GREENHECK, COOK, TWIN CITY.
 - PROVIDE HVA VARIABLE FREQUENCY DRIVE TYPE WITH PLANS AND ARCHITECTURAL REFLECTED CEILING PLANS.
 - MOUNT FROM STRUCTURE ABOVE. PROVIDE VIBRATION ISOLATION.
 - FANS CONNECTED TO LOAD IS 3500CFM. BALANCE FAN TO 3500CFM.
 - BASE MOUNTED ON EXISTING ROOF MECHANICAL CURB.
 - PROVIDE WITH MOTOR SHAFT GROUNDING RINGS. PROVIDE WITH VARIABLE FREQUENCY DRIVE AND NEMA 3R ENCLOSURE.

REGISTERS, GRILLES, AND DIFFUSERS													
MARK	MANUFACTURER	MODEL #	TYPE	GRILLE SIZE	DUCT INLET SIZE	DUCT BRANCH SIZE	MAX CFM	P.D.	NOISE CRITERIA	THROW PATTERN	REMARKS	ELECTRICAL DATA	
												VOLTAGE	PHASE
E-1	PRICE	535	STEEL LOUVERED WITH 45 DEG. DEFLECTION AND 1/2" BLADE	24"x24"	22"x22"	10"x8"	225	0.05	25	NA	1, 2, 4	208	3
E-2	PRICE	635	ALUMINUM LOUVERED WITH 45 DEG. DEFLECTION AND 1/2" BLADE	12"x10"	10"x8"	10"x8"	225	0.05	25	NA	1, 2, 4	208	3
R-1	PRICE	535	STEEL LOUVERED WITH 45 DEG. DEFLECTION AND 1/2" BLADE	24"x24"	22"x22"	10"x8"	1200	0.05	25	NA	1, 2, 4, 5	208	3
R-1F	PRICE	535FF	STEEL LOUVERED WITH 45 DEG. DEFLECTION AND 1/2" BLADE, FILTER FRAME	24"x24"	22"x22"	10"x8"	1200	0.05	25	NA	1, 2, 4, 5, 6	208	3
R-2	PRICE	60	STEEL LOUVERED WITH 45 DEG. DEFLECTION AND 1/2" BLADE	24"x24"	22"x22"	10"x8"	1500	0.05	25	NA	1, 2, 5	208	3
S-1	PRICE	SPD	SQUARE PLAQUE DIFFUSER	24"x24"	6"Ø	6"Ø	100	0.05	25	4-WAY	1-3	208	3
S-1A	PRICE	SPD	SQUARE PLAQUE DIFFUSER	12"x12"	6"Ø	6"Ø	100	0.05	25	4-WAY	1-3	208	3
S-2	PRICE	SPD	SQUARE PLAQUE DIFFUSER	24"x24"	8"Ø	8"Ø	225	0.05	25	4-WAY	1-3	208	3
S-3	PRICE	SPD	SQUARE PLAQUE DIFFUSER	24"x24"	10"Ø	10"Ø	450	0.05	25	4-WAY	1-3	208	3
S-4	PRICE	SCD	SQUARE PLAQUE DIFFUSER	24"x24"	12"Ø	12"Ø	600	0.05	25	4-WAY	1-3	208	3
S-5	PRICE	510Z	STEEL LOUVERED DIFFUSER	14"x10"	12"x8"	12"x8"	450	0.05	25	1-WAY	1-3	208	3

- RE